#### DOCUMENT RESUME

ED 457 450 CG 031 218

AUTHOR Brammer, Robert; Sandorsky, Stacy

TITLE Comparison of Day Treatment and Outpatient Treatment

Programs for Young Adolescents with ODD.

PUB DATE 2000-08-00

NOTE 17p.; Paper presented at the Annual Conference of the

American Psychological Association (108th, Washington, DC,

August 4-8, 2000).

PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Adolescents; Attention Deficit Disorders; Behavior Problems;

Behavior Rating Scales; Children; Clinics; \*Health Facilities; Hyperactivity; Outcomes of Treatment;

Psychotherapy; Sex Differences

IDENTIFIERS Child Behavior Checklist; \*Frequency Analysis; \*Oppositional

Defiant Disorder

#### ABSTRACT

This paper compares scores on the Child Behavior Checklist (CBCL) at the initial interview and at the 90-day follow-up interview for children in day treatment settings with those children receiving weekly psychotherapy. The participants included 143 children between 10 and 15 years of age who were diagnosed with Oppositional Defiant Disorder or Attention Deficit Hyperactivity Disorder. Analysis revealed that the demographic variables accounted for only 0.8% of the adjusted variance, but it was a significant predictor of changes from initial and ending CBCL scores. Only the participants' gender predicted improvements on the CBCL, with males showing more improvement over time. Treatment setting had no affect on improved behavior for either diagnostic group. Although the findings in this report are generally nonsignificant, they are important because they differ from the preponderance of research supporting day treatment programs. Further research is needed to compare day treatment programs to established outpatient treatments. (Contains 37 references.) (JDM)



Running head: DAY TREATMENT PROGRAMS

Comparison of day treatment and outpatient treatment programs for young adolescents with

**ODD** 

Robert Brammer, Ph.D. and

Stacy Sandorsky, M.A.

West Texas A&M University

Paper presented at the American Psychological Association Annual Convention (108th, Washington DC, August 4-8, 2000).

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#### **Abstract**

Compared scores on the Child Behavior Checklist (CBCL) at the initial interview and at a 90-day follow-up interview for children in day treatment settings with those receiving weekly psychotherapy. The sample included 143 children between 10 and 15 years of age who were diagnosed with either Oppositional Defiant Disorder or Attention-Deficit/ Hyperactivity Disorder. A simultaneous multiple regression analysis revealed that the demographic variables accounted for only .8% of the adjusted variance but it was a significant predictor of changes from initial and ending CBCL scores. However, only the participants' gender predicted improvements on the CBCL (with males showing more improvement over time). Treatment setting had no affect on improved behavior for either diagnostic group.



# Comparison of day treatment and outpatient treatment programs for young adolescents with ODD.

Day treatment programs, sometimes referred to as partial hospitalization centers, have become an important treatment option for emotionally troubled teens. They are designed to provide therapeutically intensive, coordinated and structured, clinical services in an environment that is stable, consistent, and cohesive. Treatment is usually time-limited, ambulatory, and active (Block, et al 1991), and is uniquely positioned between the residential in-hospital settings and outpatient clinical care.

Since their inception in England and Canada during the 1940s, day treatment programs have steadily become more popular (Sayegh & Grizenko, 1991). Early research regarding day-treatment facilities concentrated on the cost-saving benefits of such programs and not their treatment utility (Kiser, Ackerman, & Pruitt, 1987), and the continued emphasis of managed care has increased the relevance of cost savings (Pottick et al., 1995). Such early research was the driving force in mental health and led the NIMH to advocate day treatment centers (Stroul & Friedman, 1986), largely as a reaction against the negative factors associated with in-hospital psychiatric care, including the time limitations imposed by insurance companies.

For the remaining inpatient programs, increasing costs have dramatically restricted inpatient psychiatric care for children and adolescent, and the remaining inpatient facilities often limit treatment to a few days (Masters, 1997). Such limited treatment, Masters argues, results in fragmentation and discontinuous care. Such threats are especially harmful to children and adolescents who need a therapeutic milieu that is both consistent and connected with family and social ties (Sayegh & Grizenko, 1991).



Outpatient clinical treatment poses a different set of threats. It succeeds in helping children and adolescents maintain their social network of friends and family, but it may be insufficient intervention for very disturbed patients, especially when children exhibiting severe adjustment difficulties in home, school and community settings (Andrade, Lambert & Bickman, 2000). Intuitively, day treatment would seem to have all the advantages and few of the drawbacks of both in-hospital and clinical outpatient care.

Day treatment programs often involve targeting treatment areas. Typically, children referred to such programs are either having difficulty working within their academic setting (e.g., AD/HD) or having broader social problems (e.g., ODD). For these reasons, one of the common diagnostic criteria for admittance to partial hospitalization programs is an inability to function in community school programs (Zimet & Farley, 1985). Interventions often target the child's adjustment difficulties and seek to improve relationships within familial, academic, or other social environment (Zimet, Farley, & Zimet, 1994a).

The importance of addressing social networking, a feature lacking in many inpatient settings, should not be overlooked. Research focusing on adolescent substance abuse (Weinberg et al, 1998), attention-deficit hyperactivity disorder (Cantwell, 1996), depression (Birmaher et al., 1996), and violence (Loeber & Hay, 1997), all demonstrate a link between serious multiple mental health problems and many aspects of family and peer relations, schools, and neighborhoods (Henggeler, et al., 1999). Other investigators have emphasized the role of family relations in predicting and preventing inpatient hospitalizations (Doherty et al., 1987; Gutterman et al., 1993). It seems logical to conclude that a program like day treatment, which targets functional change in school, family and peer relationships, and participation in the community, would produce better treatment outcomes than either inpatient or outpatient treatment settings.



Henggeler and Santos (1997) studied populations of disturbed children and adolescents and showed some common elements of effective mental health services for this group.

Basically, effective programs provide individualized and comprehensive services in the client's social environments, and they are pragmatic, goal-oriented, family-based, intensive, and multifaceted. The "intensive" component implies that daily treatment, as offered in day-treatment programs, would prove superior to weekly outpatient therapy. However, to date, there is no cohesive empirical documentation of the advantages of day treatment programs over inhospital or outpatient clinical treatment for adolescents (Gabel & Finn, 1986; Sayegh & Grizenko, 1991). Grizenko (1997) produced outcome measures that hinted at the strengths of such programs, but was unable to establish specific utility. It appears that day treatment programs are associated with increased social skills and family functioning (Corkey & Zimet, 1987). They may also be associated with a reduction in behavior problems, depression, and isolation tendencies (Grizenko, Papineau, & Sayegh, 1993), but are these developments greater than what would be expected from traditional outpatient settings?

Kiser et al (1996) found statistically significant improvement among day treatment clients in the areas of family and individual functioning and appropriate use of community-based mental health resources up to one year after discharge. The same study found negative treatment outcomes, however, for day treatment patients with conduct disorder and for those with multiple previous inpatient, residential, or out-of-home placements. Bickman et al (1997) found no difference in outcome between groups of children who received "comprehensive, coordinated care" versus those who were treated with "traditional care," but these terms were not clearly defined and may be quite different treatments from the system of day treatment studied in our experiment.



An NIMH grant (Andrade et al., 2000) compared treatment outcomes for children who received intense levels of outpatient treatment with those who received negligible amounts of treatment and found no significant difference. Similar findings were reported by Angold, et al (1998; 2000), who measured program effectiveness using the Child and Adolescent Impact Assessment test, as well as studies conducted by Bateman and Fonagy (1999), Epstein, et al (1983), Kiser, et al (1996), and Lachar and Gdowski (1984). However, these were within group studies that did no demonstrate the efficacy of day-treatment programs over standard outpatient interventions.

#### Method

### Participants:

The sample included 143 children between 10 and 15 years of age who received treatment in either a day treatment facility or outpatient setting. The subjects were comprised of both males (N = 93) and females (N = 50) with diverse ethnic and cultural backgrounds.

Admittance into the Texas Panhandle Mental Health Authority (TPMHA) day-treatment program required the following: at least one of the following DSM-IV diagnoses: Substance abuse,

Mental retardation, Autism, or Pervasive developmental disorder. In order to match the subjects from day-treatment and outpatient settings, only individuals with Oppositional Defiant Disorder,

Attention-Deficit/ Hyperactivity Disorder, or an adjustment disorder were selected. Clients from the larger outpatient population who met these diagnoses were randomly selected in order to match the numbers observed in the day-treatment setting.

#### Setting:

The Texas Panhandle Mental Health Authority (TPMHA) serves the upper 21-counties of the Texas Panhandle. The agency's purpose is to provide comprehensive and coordinated services. The priority population includes children and adolescents needing mental health



interventions. Services are provided in fourteen different facilities and include the following categories of service: crisis resolution, treatment, and community support services. The day treatment facility is located at a local middle school in Amarillo and is referred to as the "positive choices campus."

#### Instruments:

TPMHA routinely administers the Child Behavior Checklist (CBCL) at the initial interview and at a 90-day follow-up interview. The four-page questionnaire provides insights into a parent or guardian's perception of the client's competencies and problems. Scores on the CBCL tend to remain relatively constant over time (Mattison & Spitznagel 1999), and the scores are roughly comparable to teacher reports (Bilenberg & Horder, 1998).

#### Results

A simultaneous multiple regression analysis revealed that the main effect variables (i.e., gender, child's age, and treatment setting) accounted for only 0.9% of the variance in CBCL scores, but this mild effect was statistically significant ( $\Delta \underline{R}^2 = .088, \underline{F}(3,195) = 7.38, p<.001$ ). As Table 1 depicts, only the participants' gender ( $\beta = .313, p < .001$ ) predicted how well the participants would score on their tests, with males showing more improvement over time. The type of treatment offered was not significantly associated with parental perceptions of improved functioning.

---- Insert Table 1 about here -----

Though neither treatment was superior to the other, both treatments appeared to successfully reduce behavioral problems, as reported by parents in the CBCL. The goodness of



fit for the changes between initial and ending scores was significantly high ( $\chi^2(140)$ = 107.3636, p < .99), and changes in the CBCL scores increased significantly over the observed period (t(149) = 6.71, p < .001).

#### **Discussion**

It is important to note, that the limited predictability of the day-treatment program on behavioral changes does not fully address the effectiveness of the treatment interventions. Both interventions had a significant effect on the client's CBCL scores. Still, the outpatient treatment settings ability to match the day-treatment program implies that the intensity of treatment has little effect on outcome. Apparently, weekly treatments are as effective as daily treatment, at least as the program was designed at TPHMA.

These findings tend to support the previous research (e.g., Andrade et al, 2000) regarding the limited benefit of increased contact with therapists and other treatment personnel. From this study, and from other available literature, it is difficult to know what the optimal amount of contact might be or what treatment setting might be optimal. However, emerging research suggests that differences in effectiveness between various therapies (e.g., systematic desensitization, behavior modification, Rogerian, psychodynamic, rational-emotive, and transactional analysis) are insignificant. Previous studies have also indicated that weekly treatment is superior to no treatment (Seligman, 1995).

The only significant finding is this study, should be viewed with some caution. Webster-Stratton (1996) reported that gender differences in behavioral symptoms appear to vary according to the gender of the reporting agent. Such potential biases were not controlled in this study, and the effect size of the gender difference is small. There is also a preponderance of



evidence that supports the gender of the client has little effect on therapeutic outcomes (Flaskerud, 1990; Rodolfa,. Rapaport, Lee, 1983).

Though the findings in this report are generally nonsignificant, they are important because they differ from the preponderance of research supporting day treatment programs.

Studies such as Gabel and Finn (1986), Grizenko (1997), and Zimet, Farley, and Zimet (1994b) correctly address the value of day treatment programs, especially for difficult population groups such as ODD and Conduct Disorder. However, further research should be conducted comparing these programs to established outpatient treatments.

It is also possible that the parents' perceptions of their children's behaviors were biased.

Behavior observations from teachers or peers may have yielded different results.



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Table 1:

Multiple Regression analysis for the differences on CBCL scores

	β	Standard Error of β	t(195)	p-level
Gender (female=0, male=1)	.313	.072	4.359	.001
Age	.009	.018	.128	.898
Treatment setting (day-treatment=1, outpatient=0)	037	.069	533	.594

Again this table seems a bit limited in helping me understand the break down of the findings of the study. I realize these are the final outcomes. I would like to see more specifically the criteria used ie. the CBCL form for example.



Table 1:

Multiple Regression analysis for the differences on CBCL scores

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Age	.009	.018	.128	.898
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Name (Signature):	Robert Brann	Position/Title:	Assistant Professor	
Organization/Address:	West Texas A&M University			
Telephone:	806-651-2616	FAX:	806-651-2601	
E-MAIL Address:	rbrammer@yahoo.com	Date:	October 5, 2001	

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